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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,948	03/15/2004	Thirumalai G. Palanisamy	H0004720B	4444

128 7590 02/23/2006

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EXAMINER

MARTIN, ANGELA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,948

Applicant(s)

PALANISAMY ET AL.

Examiner

Angela J. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/15/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwake, U.S. Pat. Application Pub. 2004/0096747 A1

Rejection of claims 1-38 drawn to a nonaqueous electrolyte.

Schwake teaches a nonaqueous electrolyte comprising a nonaqueous solvent, a salt, a liquid viscosity reducing agent (p. 3, claim 1). It teaches the liquid viscosity reducing agent has a viscosity that is less than half of that of the organic solvent and less than about a quarter of the solvent (Table 3). It teaches the agent has a viscosity that is less than 1 cP (sect. 0009). It teaches the agent is a C3-C10 ketone (p. 4, claim 8). It teaches the agent comprises at least 25 vol% or 50 vol% of the electrolyte (p. 4, claim 14). It teaches a viscosity at room temperature (p. 3, claim 1). It teaches the electrolyte has a conductivity of greater than 10 mS/cm (p. 3, claim 1). It teaches the salt is an ammonium or pyridinium salt (sect. 0015). It teaches the organic solvent is propylene carbonate or gamma-butyrolactone (Table 1). It teaches the organic solvent at a concentration of about 0.5 mol/l (sect. 0020). It teaches salt dissolved in solvent a concentration of greater than 1 mol/l (sect. 0016). It teaches an additional salt (p. 4, claim 6). It teaches the additional salt is tetralkylammonium (p. 4, claim 6). It teaches an

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electrical energy storage device (abstract). It teaches the salt is a tetraethyl ammonium tetrafluoroborate (sect. 0015-0016).

Thus, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although the prior art of record does not teach the density and specific gravity of the liquid viscosity reducing agent, these values would correspond to the agent, which the prior art of record teaches as various ketones. In addition, although the prior art of record does not recite pentanone and methyl isobutyl ketone (MIBK) as the agent, it does recite ketones and ethylmethylketone, which is in the same class as pentanone and MIBK and would have the same effect as a liquid viscosity reducing agent. In addition, the voltage window of the electrolyte would fall within the claimed range since the electrolyte of the prior art is equivalent to the electrolyte of the application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AJM